



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,736	04/30/2001	Masaaki Bannai	389.40083X00	9146

20457 7590 07/14/2005

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-3873

EXAMINER

BORISSOV, IGOR N

ART UNIT PAPER NUMBER

3639

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/843,736

Applicant(s)

BANNAI ET AL.

Examiner

Igor Borissov

Art Unit

3639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,3,5-8,10,12-15,17,19-23 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5-8,10,12-15,17,19-23 and 26-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____   |

## **DETAILED ACTION**

### ***Response to Amendment***

Amendment received on 6/27/2005 is acknowledged and entered. Claims 1, 4, 9, 11, 16, 18 and 24-25 have been previously canceled. Claims 2, 3, 8, 10, 12, 14, 17, 19 and 22 have been amended. New Claims 26-29 have been added. Claims 2-3, 5-8, 10, 12-15, 17, 19-23 and 26-29 are currently pending in the application.

### ***Examiner's Note***

The examiner understands the phrase "*cold or warm heat energy*" as variation of energy usage.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2-3, 5-8, 10, 12-15, 17, 19-23 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yablonowski et al. in view of Kitamura et al. (US 5,762,265).**

**Claim 2.** Yablonowski et al. (Yablonowski) teaches a system for monitoring energy consumption of lighting systems, comprising:

a database for storing energy consumption data before taking energy-saving measures and general information about a facility; measuring means which measures the energy consumption after taking energy-saving measures; and calculating means for calculating energy curtailment quantities before and after taking said energy-saving measures by incorporating measured data obtained by said measuring means via a communication line and comparing said measured data and said energy consumption

Art Unit: 3639

data stored in said database (C. 3, 49-61; C. 5, L. 9-25; C. 6, L. 54-67); wherein said general information includes variable data related to air conditioning and operation condition, including hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (C. 6, L. 28-38).

Yablonowski does not explicitly teach that said data related to air conditioning includes data regarding temperature and humidity of atmosphere.

Kitamura et al. (Kitamura) teaches a system for monitoring an air-conditioning unit, including measuring means for measuring air temperature and humidity in a facility, a database for storing said measured data regarding air temperature and humidity, and means for calculating of savings in energy consumption based on said stored data (C. 13, L. 47-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yablonowski to include that said data related to air conditioning includes data regarding temperature and humidity of atmosphere, as disclosed in Kitamura, because it would advantageously allow to provide comfortable air-conditioning control while achieving reasonable saving in energy consumption, as specifically taught in Kitamura (C. 19, L. 66 – C. 20, L. 7).

**Claim 3.** Same system as in claim 2, including calculating means for calculating the energy curtailment quantities before and after taking said energy-saving measures by incorporating measured data obtained by said measuring means and comparing said measured data and said energy consumption data stored in said database (Yablonowski; C. 6, L. 54-67). Kitamura teaches said system for monitoring an air-conditioning unit, including measuring means for measuring air temperature and humidity in a facility, a database for storing said measured data regarding air temperature and humidity, and means for calculating of savings in energy consumption based on said stored data (C. 13, L. 47-56). The motivation to combine Yablonowski and Kitamura would be to provide comfortable air-conditioning control while achieving reasonable saving in energy consumption.

**Claims 5.** Same system as in Claim 2, including calculating means for calculating the energy curtailment quantities before and after taking said energy-saving measures, and charging an amount obtained by said calculating (Yablonowski; C. 8, L. 30-58).

**Claims 6.** Same system as in Claim 5. Information as to "*wherein said ratio is determined with reference to the operating hours... of the facility*" does not recite structural limitations, and, therefore, is given no patentable weight. MPEP 2106 (II) (C) states: "Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation."

**Claim 7.** Same system as in Claim 5, including calculating means for calculating the energy curtailment quantities before and after taking said energy-saving measures, and charging an amount obtained by said calculating, wherein billing for a time period is calculated as a function of the power saving for that particular time period (C. 8, L. 30-58). Language as to "*if the total amount of the fixed and variable costs is  $Q$ , the annual amount of curtailment of energy costs is  $P$ , and  $\alpha$  and  $\beta$  are positive coefficients (where  $\alpha > \beta$ ), said energy service enterprise receives:  $X1\%$  of the curtailment amount of energy costs when  $P \geq \alpha Q$ ;  $X2\%$  of the curtailment amount of energy costs when  $\beta Q \leq P < \alpha Q$  (where,  $X1 < X2$ ); and a predetermined amount when  $P < \beta Q$* " does not recite structural limitations, and, therefore, is given no patentable weight. MPEP 2106 (II) (C) states: "Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation." Furthermore, Claims Directed to an Apparatus must be distinguished from the prior art in terms of structure rather than function, *In re Danly* 263 F.2d 844, 847, 120 USPQ 582, 531 (CCPA 1959). Furthermore, a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the

Art Unit: 3639

prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1657 (bd Pat. App. & Inter. 1987).

**Claim 8.** Yablonowski teaches a method for monitoring energy consumption of lighting systems, comprising:

installing an energy-saving equipment by the energy service provider at no cost to the facility (client) (C. 7, L. 8-10); measuring and recording the energy consumption data of said energy-saving equipment before and after installation of said equipment, and general information about a facility; calculating the difference in value of the energy consumption before and after installation of said energy-saving equipment; calculating the amount of curtailment of the energy costs based on said calculation; and allowing said energy service provider to collect said installation cost from said amount of curtailment (C. 3, L. 49-61; C. 5, L. 9-25; C. 6, L. 54-67); wherein said general information includes data related to air conditioning and operation condition, including hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (C. 6, L. 28-38).

Yablonowski does not explicitly teach that said data related to air conditioning includes data regarding temperature and humidity of atmosphere.

Kitamura et al. (Kitamura) teaches a system for monitoring an air-conditioning unit, including measuring means for measuring air temperature and humidity in a facility, a database for storing said measured data regarding air temperature and humidity, and means for calculating of savings in energy consumption based on said stored data, wherein said air temperature and humidity data agree within a set complaint (allowable) range (C. 13, L. 47-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yablonowski to include that said data related to air conditioning includes data regarding temperature and humidity of atmosphere, as disclosed in Kitamura, because it would advantageously allow to provide comfortable air-conditioning control while achieving reasonable saving in energy consumption, as specifically taught in Kitamura (C. 19, L. 66 – C. 20, L. 7).

**Claim 10.** Yablonowski teaches a method for monitoring energy consumption of lighting systems, comprising: installing an energy-saving equipment by the energy service provider at no cost to the facility (client) (C. 7, L. 9-10); measuring and recording the energy consumption data of said energy-saving equipment before and after installation of said equipment, and general information about a facility; calculating the difference in value of the energy consumption before and after installation of said energy-saving equipment; calculating the amount of curtailment of the energy costs based on said calculation (C. 3, L. 49-61; C. 5, L. 9-25; C. 6, L. 54-67); and allowing said energy service provider to receive at least a part of said amount of curtailment (C. 7, L. 11-13); wherein said general information includes data related to air conditioning and operation condition, including hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (C. 6, L. 28-38).

Yablonowski does not explicitly teach that said data related to air conditioning includes data regarding temperature and humidity of atmosphere.

Kitamura teaches a method for monitoring an air-conditioning unit, including measuring means for measuring air temperature and humidity in a facility, a database for storing said measured data regarding air temperature and humidity, and means for calculating of savings in energy consumption based on said stored data, wherein said air temperature and humidity data agree within a set complaint (allowable) range (C. 13, L. 47-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yablonowski to include that said data related to air conditioning includes data regarding temperature and humidity of atmosphere, as disclosed in Kitamura, because it would advantageously allow to provide comfortable air-conditioning control while achieving reasonable saving in energy consumption, as specifically taught in Kitamura (C. 19, L. 66 – C. 20, L. 7).

**Claim 12.** Said method as in claim 10, wherein calculating the amount of curtailment of the energy costs is conducted based on operation condition data including hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (Yablonowski; C. 6, L. 28-38).

**Claims 13 .** Yablonowski teaches said method as in claim 10, wherein said energy service provider performs maintenance of the equipment subjected to energy-saving measures without compensation (C. 8, L. 52-58), after reviewing the feasibility of the project and profit margin (C. 6, L. 54-65).

However, Yablonowski do not specifically teach that reviewing the feasibility of the project and profit margin includes establishing a predetermined reference value.

However, it is old and well known that cost estimate of a business project includes establishing predetermined reference values, such as calculating break even, cost of manufacturing, goods sold, etc.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yablonowski and Kitamura to include that reviewing the feasibility of the project and profit margin includes establishing a predetermined reference value, because it would advantageously allow to employ existing business modeling tools, thereby assure accuracy in estimating funds needed for the project.

**Claims 14 and 15.** Yablonowski teaches said method as in claim 10, including: calculating the amount of curtailment of the energy costs; and allowing said energy service provider to receive at least a part of said amount of curtailment (C. 3, L. 49-61; C. 5, L. 9-25; C. 6, L. 54-67); wherein billing for a time period is calculated as a function of the power saving for that particular time period (C. 8, L. 40-50).

Yablonowski and Kitamura do not specifically teach that *if the total amount of the fixed and variable costs is Q, the annual amount of curtailment of energy costs is P, and*



Art Unit: 3639

*$\alpha$  and  $\beta$  are positive coefficients (where  $\alpha > \beta$ ), said energy service enterprise receives:  $X1\%$  of the curtailment amount of energy costs when  $P \geq \alpha Q$ ;  $X2\%$  of the curtailment amount of energy costs when  $\beta Q \leq P < \alpha Q$  (where,  $X1 < X2$ ); and a predetermined amount when  $P < \beta Q$ ; and wherein said  $X2$  is calculated by the formula:*

$$X2 = X1 + (\alpha - P/Q)(100-X1)/(\alpha - \beta).$$

However, there is no indication in the specification that said formula provides the advantage over the prior art. Without such indication, it appears that said formula is obvious variation of any known calculation method.

**Claim 17.** Yablonowski teaches a method for monitoring energy consumption of lighting systems, comprising: conducting feasibility study of a project for installing an energy-saving equipment by the energy service provider (C. 6, L. 54-65); at no cost to the facility (client) (C. 7, L. 8-10); measuring and recording the energy consumption data of said energy-saving equipment after installation of said equipment, and general information about a facility; calculating the difference in value of the energy consumption before and after installation of said energy-saving equipment; calculating the amount of curtailment of the energy costs based on said calculation (C. 3, L. 49-61; C. 5, L. 9-25; C. 6, L. 54-67); and providing carefully monitoring and maintenance of the power consumption to insure that the power saving devices continue to function properly (C. 8, L. 52-54), thereby indicating confirming the assured quantity of curtailment; wherein said general information includes air conditioning data, and operation condition data, which includes hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (C. 6, L. 28-38).

Yablonowski does not specifically teach that said air conditioning data includes *temperature and humidity data*.

Kitamura teaches said method for monitoring an air-conditioning unit, including measuring means for measuring air temperature and humidity in a facility, a database for storing said measured data regarding air temperature and humidity, and means for calculating of savings in energy consumption based on said stored data, wherein said

Art Unit: 3639

air temperature and humidity data agree within a set complaint (allowable) range (C. 13, L. 47-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yablonowski to include that said data related to air conditioning includes data regarding temperature and humidity of atmosphere, as disclosed in Kitamura, because it would advantageously allow to provide comfortable air-conditioning control while achieving reasonable saving in energy consumption, as specifically taught in Kitamura (C. 19, L. 66 – C. 20, L. 7).

**Claim 19.** Said method as in claim 17, wherein calculating the amount of curtailment of the energy costs is conducted based on operation condition data including hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (Yablonowski; C. 6, L. 28-38).

**Claim 20.** Said method as in claim 19, wherein feasibility study of the project is conducted before realization of the project (Yablonowski; C. 6, L. 54-64).

**Claim 21.** Said method as in claim 17, wherein said energy service provider receives at least a part of said amount of curtailment receive at least a part of said amount of curtailment (Yablonowski; C. 7, L. 9-13); said amount of curtailment compensate the retrofitting and maintenance of said energy efficient equipment (Yablonowski; C. 8, L. 48-58).

**Claim 22.** Said method as in claim 21, wherein calculating the amount of curtailment of the energy costs is conducted based on operation condition data including hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (Yablonowski; C. 6, L. 28-38).

**Claim 23.** Yablonowski teaches said method as in claim 21, wherein said energy service provider performs maintenance of the equipment subjected to energy-saving

Art Unit: 3639

measures without compensation (C. 8, L. 52-58), after reviewing the feasibility of the project and profit margin (C. 6, L. 54-65).

However, Yablonowski do not specifically teach that reviewing the feasibility of the project and profit margin includes establishing a predetermined reference value.

However, it is old and well known that cost estimate of a business project includes establishing predetermined reference values, such as calculating break even, cost of manufacturing, goods sold, etc.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yablonowski to include that reviewing the feasibility of the project and profit margin includes establishing a predetermined reference value, because it would advantageously allow to employ existing business modeling tools, thereby assure accuracy in estimating funds needed for the project.

**Claim 26.** Yablonowski teaches a system for monitoring energy consumption of lighting systems, comprising:

a database for storing energy consumption data before taking energy-saving measures and general information about a facility; measuring means which measures the energy consumption after taking energy-saving measures; and calculating means for calculating energy curtailment quantities before and after taking said energy-saving measures by incorporating measured data obtained by said measuring means via a communication line and comparing said measured data and said energy consumption data stored in said database (C. 3, 49-61; C. 5, L. 9-25; C. 6, L. 54-67); wherein said general information includes variable data related to air conditioning and operation condition, including hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (C. 6, L. 28-38).

Yablonowski does not explicitly teach that said data related to air conditioning includes data regarding temperature and humidity of atmosphere.

Kitamura teaches said system for monitoring an air-conditioning unit, including measuring means for measuring air temperature and humidity in a facility, a database for storing said measured data regarding air temperature and humidity, and means for

Art Unit: 3639

calculating of savings in energy consumption based on said stored data (C. 13, L. 47-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yablonowski to include that said data related to air conditioning includes data regarding temperature and humidity of atmosphere, as disclosed in Kitamura, because it would advantageously allow to provide comfortable air-conditioning control while achieving reasonable saving in energy consumption, as specifically taught in Kitamura (C. 19, L. 66 – C. 20, L. 7).

**Claim 27.** Same system as in Claim 26, including calculating means for calculating the energy curtailment quantities before and after taking said energy-saving measures by incorporating measured data obtained by said measuring means and comparing said measured data and said energy consumption data stored in said database (Yablonowski; C. 6, L. 54-67).

**Claim 28.** Yablonowski teaches a system for monitoring energy consumption of lighting systems, comprising:

a database for storing energy consumption data before taking energy-saving measures and general information about a facility; measuring means which measures the energy consumption after taking energy-saving measures; and calculating means for calculating energy curtailment quantities before and after taking said energy-saving measures by incorporating measured data obtained by said measuring means via a communication line and comparing said measured data and said energy consumption data stored in said database (C. 3, 49-61; C. 5, L. 9-25; C. 6, L. 54-67); wherein said general information includes variable data related to air conditioning and operation condition, including hours of operation, kilowatt hours rates and whether operating hours vary in different places of the facility (C. 6, L. 28-38).

Yablonowski does not explicitly teach that said data related to air conditioning includes data regarding temperature and humidity of atmosphere.

Kitamura teaches said system for monitoring an air-conditioning unit, including measuring means for measuring air temperature and humidity in a facility, a database for storing said measured data regarding air temperature and humidity, and means for calculating of savings in energy consumption based on said stored data (C. 13, L. 47-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yablonowski to include that said data related to air conditioning includes data regarding temperature and humidity of atmosphere, as disclosed in Kitamura, because it would advantageously allow to provide comfortable air-conditioning control while achieving reasonable saving in energy consumption, as specifically taught in Kitamura (C. 19, L. 66 – C. 20, L. 7).

**Claim 29.** Same system as in Claim 28, including calculating means for calculating the energy curtailment quantities before and after taking said energy-saving measures by incorporating measured data obtained by said measuring means and comparing said measured data and said energy consumption data stored in said database (Yablonowski; C. 6, L. 54-67).

### ***Response to Argument***

Applicant's arguments with respect to Claims 2-3, 5-8, 10, 12-15, 17, 19-23 and 26-29 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see form PTO-892).

Any inquiry concerning this communication should be directed to Igor Borissov at telephone number (571) 272-6801.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Hayes, can be reached at (571) 272-6708.

Any response to this action should be mailed to:

***Commissioner of Patents and Trademarks  
Washington D.C. 20231***

or faxed to:

**(703) 872-9306** [Official communications; including After Final  
communications labeled "Box AF"]

Igor Borissov  
Patent Examiner  
Art Unit 3639



IB

7/07/2005